
Integrated Vector Management

Evidence and Capacity Work Stream

Thursday 9th Feb
13:30 – 15:00

Josiane Etang
Michael Macdonald



IVM Evidence and Capacity 13:30-15:00

13:30	IVM E&C Mandate
13:40	1. Capacity-building; directory of institutions and courses
13:50	2. GVCR roll-out
14:00	3. AFRO/ANVR insecticide resistance management capacity
14:20	4. Regional Networks (entomology for elimination/ outdoor transmission)
14:40	5. Vector Control in Humanitarian Emergencies
15:00	Close

IVM Evidence and Capacity Mandate

Generate and share evidence to promote effective delivery and integration of malaria vector control interventions, and support related country capacity strengthening.

Specifically, to:

IVM Evidence and Capacity Work Stream,

- I. Generate and share evidence on effective and efficient deployment of prior, existing and new vector control interventions and practices;

IVM Evidence and Capacity Work Stream,

- II. Generate and share evidence on integration of all vector control tools, including lessons from other regions and disease eradication programs;

IVM Evidence and Capacity Work Stream

- III. Work with WHO and RBM partners to build entomology and vector control capacity at all levels in endemic countries.

IVM Proposed “Projects”

- 1. Capacity-building: Update directory of entomology and vector control training institutions, programs and resources.**
- 2. Support roll-out of Global Vector Control Response**
- 3. Build capacity to manage Insecticide Resistance in the WHO Africa Region**
- 4. Share best practices for entomological monitoring and outdoor/residual transmission across regions.**
- 5. Improve strategies and access to tools for IVM in Humanitarian Emergencies.**

Project 1: **Capacity-building: Update directory of entomology and vector control training institutions, programs and resources**

In collaboration with WHO ANVR, ALMA, ACTMalaria, APMEN/APLMA, PAMCA and AMCA, build directory of entomology and vector control training institutions programs and resources to improve networking, sharing of best practices and advocacy

Name of Activity	Timeline '17/'18	Actual Status	Project manager	Support required	Comments
Develop survey instrument	Feb- Mar				With TDR/GMP
Disseminate via VCWG networks and partners	April				Via partners
Collate and link with GVCR Needs Assessment	June '17				In time for GVCR launch at WHO

Project 2: Support roll-out of Global Vector Control Response (GVCR).

Anticipated that the GVCR will be endorsed by the World Health Assembly in May 2017.

RBM VCWG will work with WHO to roll out the GVCR to countries, especially in the areas of improving capacity and entomological monitoring across the major vector-borne diseases, including *Aedes*-borne diseases

Priority activities for 2017 – 2022

Priority activity	Contribution
1. National and regional vector control strategic plans developed/adapted to align with draft global vector control response	Technical support provided in the development process - Business plan development
2. National vector control needs assessment conducted or updated and resource mobilization plan developed (including for outbreak response)	Participate in VCNA
3. National entomology and cross-sectoral workforce appraised and enhanced to meet identified requirements for vector control, including for epidemic response	
4. Relevant staff from health ministries or supporting institutions trained in public health entomology	

Priority activities for 2017 – 2022

Priority activity	Contribution
5. National and regional institutional networks to support training and/or education in public health entomology and technical support established and functioning	Exchange programmes Stronger linkages with AMCA Spray equipment and insecticide manufacturers to provide training to ensure quality implementation Capitalise on established networks eg. VC working groups in regions, E8, leadership (ALMA, APLMA)
6. National agenda for basic and applied research on entomology and vector control established and/or progress reviewed	Provided technical input
7. National inter-ministerial task force for multisectoral engagement in vector control established and functioning	
8. National vector surveillance systems strengthened and integrated with health information systems to guide vector control	Expertise provided for state-of-art integrated into surveillance systems. Leverage established systems (eg. E8)

Priority activities for 2017 – 2022

Priority activity	Contribution
9. National targets for protection of at-risk population with appropriate vector control aligned across vector-borne diseases	
10. National plan for effective community engagement and mobilization in vector control developed	



Project 3: Build capacity to manage Insecticide Resistance in the WHO Africa Region

In collaboration with ANVR, WHO AFRO, PAMCA, PMI and partners, improve links among national training and research institutions and national vector borne disease control programs to monitor and manage insecticide resistance

#	Name of Activity	Timeline in 2017/2018	Status	Responsible Project manager	Support required	Comment
1	Devise a formal process for linking national training/research institutions to vector borne disease control programs in order to facilitate capacity building	2017-2018	Ongoing	Josiane Etang & Birkinesh Ameneshawa	Budget: 450 000 USD	WHO, Countries
2	Identify and fill human and infrastructure capacity gaps	2017-2018	Scheduled			Research institutions, WHO, ANVR, PMI, partners
3	Reinforce the training capacities of research institutions (update/refreshment workshops or meetings)	4 th term 2017	Scheduled			Research institutions, WHO, ANVR, RBM, partners, PAMCA
4	Organize IR management hands-on training sessions for vector borne disease control programs and other staff	2017-2018	Ongoing			Research institutions, ANVR, PMI
5	Coordinate the mobilization of resources for insecticide resistance management (Equipment, supplies, ...)	2017-2018	Ongoing			WHO, RBM, partners, PAMCA, PMI

New activities from work stream meeting

Work with Swiss Tropical Institute/Swiss Development Cooperation to support the development of a global capacity building platform in collaboration with WHO/ GMP

Contact AMCA, ALMA, Industry Association and crop field for resistance prevention / management training courses

Work with academics and member countries to establish insecticide management training programmes in universities



Vector Control Working Group Update

**Dr Christina Rundi, Chair
(Ministry of Health, Malaysia)**



Project 4: Share best practices for entomological monitoring and outdoor/residual transmission across regions.

Specifically, this includes collaboration with APMEN for adapting entomological monitoring for malaria elimination and with the Mekong Outdoor Malaria Transmission Network to meet the challenges of outdoor and residual transmission common to Amazonia, Africa, Asia and the Western Pacific

Name of Activity	Timeline in 2017/2018	Status	Responsible Project manager	Support required	Comment
Strengthen vector biology research and VC tool development through best practice exchange and coordinated research agenda		Ongoing	Research partners	Funding	
Enhance integration of anthropological approaches, community participation and engagement		Planned	Implementing partners		
Enhance access to necessary tools and capacity through information exchange and coordinated programming		Ongoing	APMEN VCWG + MOMTN Secretariats		
Address market and regulatory challenges through improved communication with regulators and		Planned	Implementing partners		

- **The Vector Control Working Group (VcWG): APMEN Country Partners and Partner Institutions.**
- **Established when the Network was formed in 2009 with two (2) main objectives:**
 - ❑ **To advocate for the level of vector control capacity at regional and country level required to attain and maintain malaria elimination.**
 - ❑ **To stimulate and where possible coordinate operational research on questions directly related to intensified malaria control and elimination.**
- **Despite the fact that vector control constitutes major components of the elimination strategy, many programmes still lack qualified entomologists/vector control specialists.**

**Vivax
Working
Group**

**Surveillance &
Response
Working Group**

Current priorities for vector control – end game approach

- **Capacity building and need for training in region**
- **Strategies to address:**
 - **Outdoor transmission: ento surveillance**
 - **Residual Transmission: hybrid, secondary vector**
 - **Vector control methods for mobile populations**
 - **Monitoring and prevention of increased insecticide resistance in region.**
- **Quality assurance of use of insecticide**
- **Appropriate use of IVM**



Key challenges

- **Capacity development and operational research on vector control for a range of vector borne diseases. Example: Lack of follow up after IVM course,**

- Country programme manager to form an “*IVM Inter-sector Steering Committee*” (National, State, District level)
- The programme manager to allocate funds to support proposed IVM project
- Participants should carry out a TOT at their districts level
- Participants should carry out the IVM implementation plan at their level.

- **Limited capacity development opportunities for field based/district staff in vector control and field entomologists (IVM Training & WHO).**
- **Limited knowledge of new appropriate technologies and tools for vector control. Few opportunities for accessing this information.**

VcWG Activities & Outcomes

Activities

Yearly VcWG Meeting

2015: Kuala Lumpur

- Trade Fair Café Session - private sector rep showcased latest industry innovations in vector control.
- Focused on key issues such as IR, IVM, modelling and mapping programs and software (VecNET and IR Mapper).

2016 – Bangkok

- Focused on outdoor transmission, Mekong Outdoor Malaria Transmission Network (MOMTN)
- Supported by APMEN, Kasetsart University Thailand, Malaria Consortium and Roll Back Malaria's Vector Control Working Group.


Outcomes

Information sharing and discussions on vector control

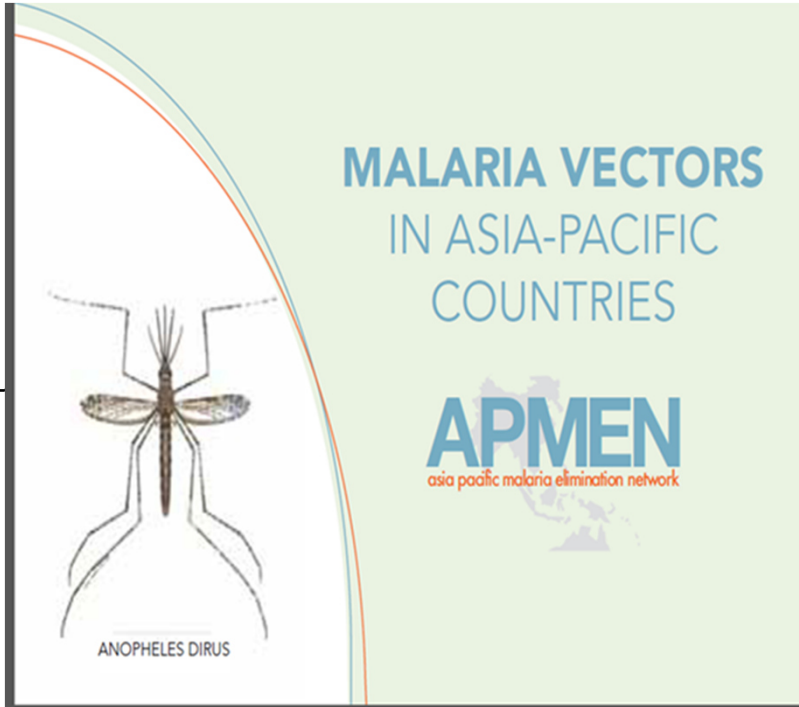
Good opportunity to learn about new developments and technologies, as well as discuss countries' specific needs and challenges.

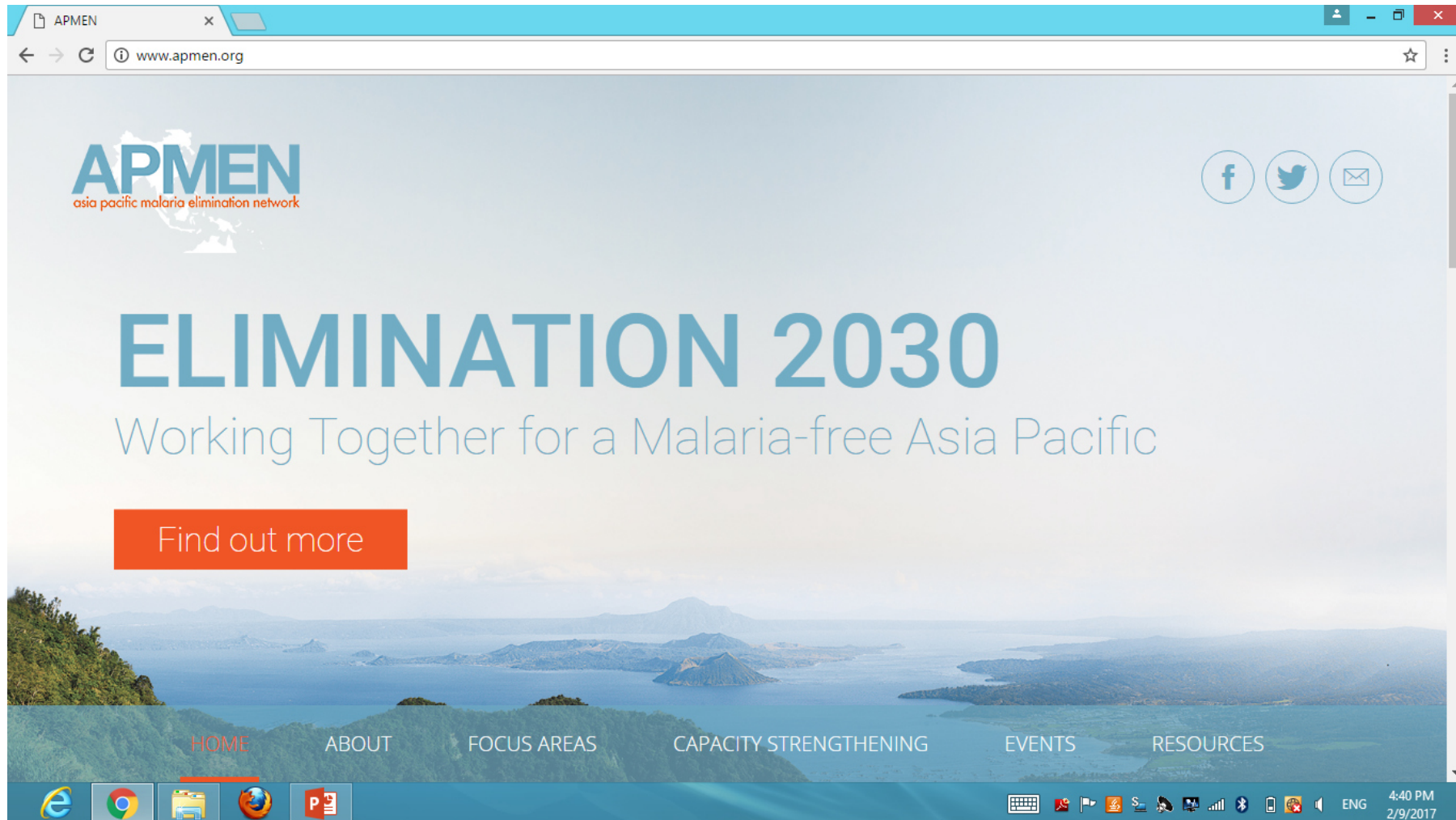


VcWG Activities & Outcomes

Activities	Outcomes
Thematic Fellowships (Grant from Sumitomo, support from Inst Partners)	Regional peer-to-peer learning and leadership Increased vector operational capacity including for malaria
Supported 23 people to attend IVM course (MOH Malaysia & ACT Malaria & WHO since 2011)	Increased capacity at subnational level in IVM 
Vector Research Grants	Improve and increase effectiveness of VC techniques
Co-supported participants to Vector Control in Elimination training led by WHO WPRO	Improved planning, implementation and evaluation of VC intervention, including monitoring IR
Workshops / Meetings / Study Tours	Working papers on VC & elimination tool, training needs and capacity mapping; role of larvicides & repellents in malaria elimination.

VcWG Activities & Outcomes

Activities	Outcomes
<p><i>Malaria vectors in Asia Pacific countries Pocketbook</i> (Armed Forces Research Institute & Walter Reed Biosystematic Unit)</p>	<p>Useful reference tool for field entomologists, provide faster and more effective accuracy in identifying vectors in the field.</p> 
<p>APMEN Case studies APMEN Country Briefings Atlas of APMEN 2011</p>	



Project 5: Vector Control In Humanitarian Emergencies – Next Steps

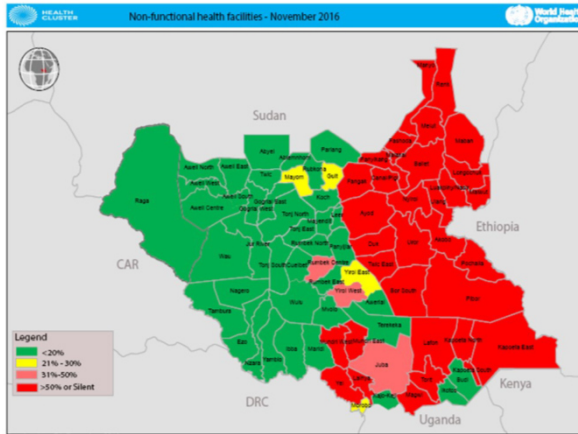
Different Challenges of Static & Mobile Communities



Valentina Buj - UNICEF
Richard Allan – MENTOR

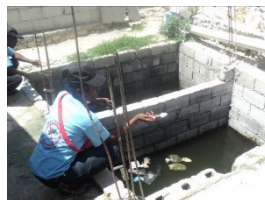


MENTOR UNICEF VC Strategy in Bentui and Malakal IDP Camps – South Sudan



Combining Old Tools :

- Indoor Residual Spraying (IRS)
- Larval Source Management
- Universal LLIN coverage
- Fly Control
- IEC



Changing Active Ingredients to Achieve Control

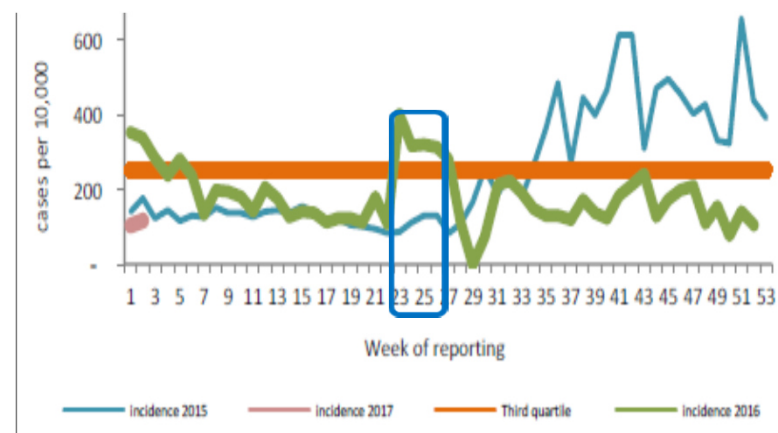
Bentiu 2015 & 16

- IRS & IEC reached 92,647 beneficiaries
- LLIN 100% in 2015
- LSM-4,986 sites treated
- Fly Control-6,625 sites treated

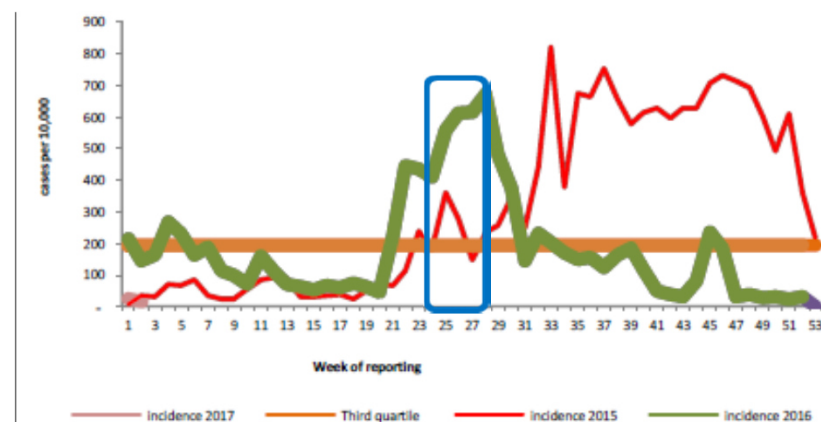
Malakal 2015 & 16

- IRS & IEC reached 41,172
- LLIN 100% 2015
- LSM-336 sites treated
- Fly Control-1,094 sites treated

Malaria trends for IDPs in Malakal PoC 2015-2017 (blue indicates implementation of IRS)



Malaria trend for IDPs in Bentiu PoC 2015-2017-(blue indicates implementation of IRS)



Same suit of VC in 2015 & 16

**No control in 2015
Good control in 2016**

**Only change was the
IRS active ingredient
(ICON to Actelic)**



Cutaneous leishmaniasis

‘Aleppo Boil’

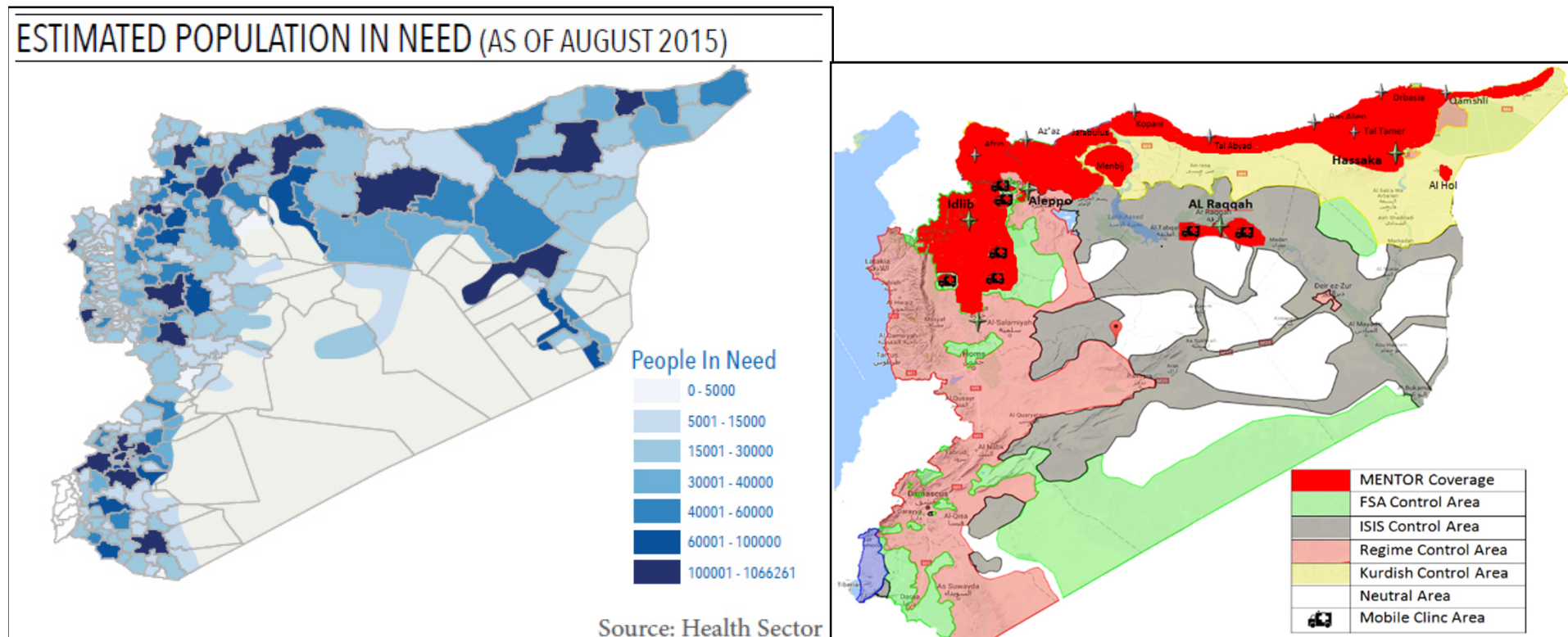
Transmitted by bite of sandflies, from sunset to sunrise.

Controlled largely using malaria prevention strategies



Syria - Largest Humanitarian Crisis since WWII

Leishmaniasis vector control, same challenges



MENTOR (RED) has supported 104 health facilities and >30 mobile clinics since 2013, and delivers IRS, close mesh LLINs, LLIC, & targeted waste management

Now looking as increased displacement from cities, and need for additional VC tools for outdoor sleepers and in temporary shelters

Leishmaniasis – No. 1 disease in the war zone and expanding fast (Syria, Turkey and Iraq borders), why?

Destruction of buildings

- ramps up sandfly breeding sites

Reduction in municipal services

- uncollected waste escalates sandfly breeding

Living conditions

- Increased exposure to sandflies
- Proximity to host reservoirs & breeding sites

Mass Population displacement

Within and across borders



Atme camp – Idlib

<http://www.theepochtimes.com/>

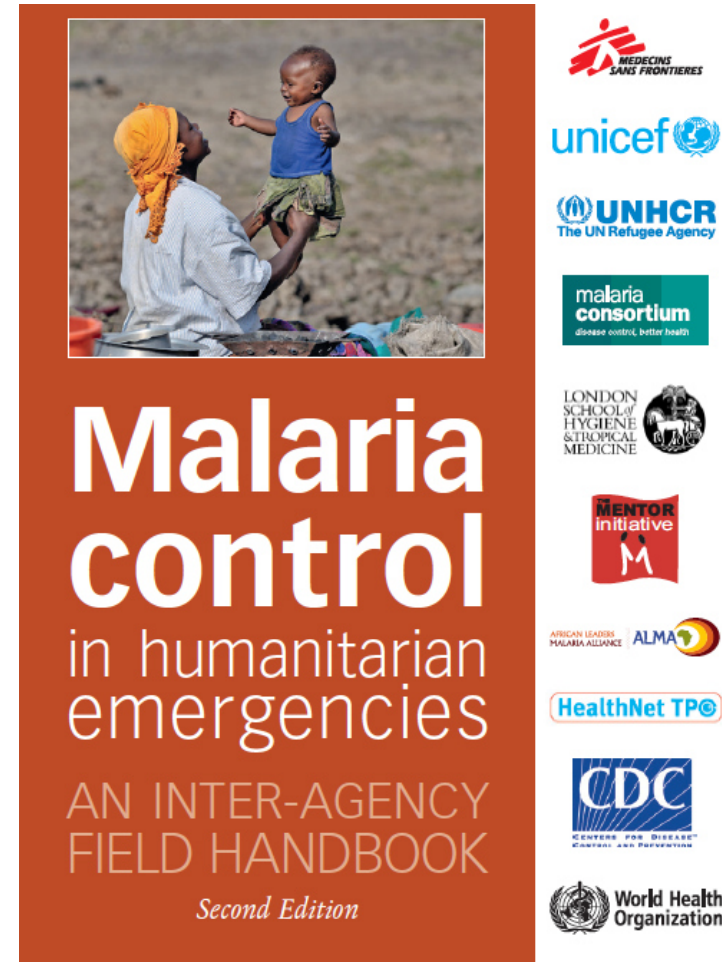


Would the populations of Canada, Australia and New Zealand combined be considered “niche”?



In 2015 there were **65 million displaced people**, of which >40 million were IDPs and >20 million were refugees.

The vast majority at risk of VBDs
Particularly malaria and leish.



Tools Advised for Monitored Deployment in humanitarian Crises

Insecticide Treated Plastic Sheetting

To provide protective shelter (without need for IRS)



Insecticide Treated Curtains

To reduce entry of mosquitoes, sandflies and other insects



Insecticide Treated Blankets

To provide some Protection to people without or with shelter



Demuria Outdoor LLINs

To protect people sleeping outside, potentially used with blankets



Actions to move forward:

**Interagency Working Group of Health/Shelter/WASH Organisations who work in Humanitarian Crises
(MENTOR, UNICEF, UNHCR, MSF, IFRC, IRC, IMC, OXFAM etc.) working together for:**

1. Improved use of standard VC tools	2. Improved learning around existing niche tool usage in humanitarian crises	3. Provision of field platforms for evaluation of new niche tools / actives
Ensuring cross agency learning from field experience with LLINs, IRS, larvicide etc.	Interagency SOPs, development and dissemination, for delivering niche tools to build on the advised usage within the WHO Interagency Handbook.	Offer advise to manufacturers on humanitarian crises contexts, to help inform tool development
Technical support through interagency exchange to help resolve technical / operational challenges	Interagency M&E templates to improve standardisation of data gathered when using niche tools to build on the advised usage within the WHO Interagency Handbook.	Interface with academic and other partners on the development of operational research protocols to ensure designs consider all factors relevant to humanitarian crises
Technical support to help disseminate results	<p>Work together to ensure dissemination of field data / lessons learnt to partners and normative bodies to help expand the operational evidence base</p> <p>Interface with WHO to ensure that development of VC guidelines considers all data available from humanitarian crises</p>	Offer platforms (where suited, and where feasible) and partnerships, to manufacturers and others, to pilot new tools, or actives, where these could provide solutions to current VC challenges in humanitarian crises